



International Civil Aviation Organization

**MIDANPIRG Meteorology Sub-Group
Twelfth Meeting (MET SG/12)**

(Virtual, 12 – 13 November 2024)

Agenda Item 3: Global and Regional Developments

PROGRESS ON THE AMENDMENT TO ANNEX 3 AND A NEW PANS-MET

(Presented by HQ Technical Officer)

SUMMARY

This paper presents a summary of the progress on the amendment proposals to Annex 3 — Meteorological Service for International Air Navigation and a new Procedures for Air Navigation Services — Meteorology (PANS-MET, Doc 10157), arising from the fifth meeting of the Meteorology Panel (METP/5).

Action by the meeting is at paragraph 3.

1. INTRODUCTION

1.1 The meeting may recall that the Air Navigation Commission (ANC), at the fifth meeting of its 221st Session held on 24 November 2022, considered proposals developed by the fifth meeting of the Meteorology Panel (METP/5) to amend the Standards and Recommended Practices (SARPs) in Annex 3 — *Meteorological Service for International Air Navigation*, a new *Procedures for Air Navigation Services — Meteorology* (PANS-MET, Doc 10157), and consequential amendments to Annex 6 — *Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes*, Part II — *International General Aviation — Aeroplanes* and Part III — *International Operations — Helicopters*, Annex 10 — *Aeronautical Telecommunications, Volume II — Communication Procedures including those with PANS status*, Annex 11 — *Air Traffic Services*, Annex 15 — *Aeronautical Information Services, Procedures for Air Navigation Services — ICAO Abbreviations and Codes* (PANS-ABC, Doc 8400), *Procedures for Air Navigation Services — Aeronautical Information Management* (PANS-AIM, Doc 10066) and *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444).

1.2 The proposals address the developments of the restructured Annex 3 and the new PANS-MET, and amendments relating to space weather information services, quantitative volcanic ash information and the international airways volcano watch (IAVW), the ICAO meteorological information exchange model (IWXXM), the world area forecast system (WAFS), and the improved definition of meteorological authority and the introduction of a new definition of meteorological service provider

1.3 The Commission agreed that the proposals be transmitted to States and appropriate international organizations for comments. Accordingly, State letter AN 10/1-23/1, dated 26 January 2023, was sent with a due date for replies on 26 July 2023. In total, seventy-nine replies were received

from seventy-four States, including twenty-five Council Member States, and five international organizations. The majority of replies indicated broad support for the proposed amendment, while extensive number of comments were provided not only on the changes contained in the proposals but also concerning existing provisions.

1.4 The background and further progress on the proposed amendment are described under the section 2.

2. DISCUSSION

CONTENTS OF THE AMENDMENT PROPOSAL ARISING FROM METP/5

2.1 The amendment proposal contains broader context including the following items.

Restructured Annex 3 and the new PANS-MET: According to the Recommendation 5/2 by the Meteorology Divisional Meeting (2014) (MET /14), the METP developed the restructured Annex 3 and the new PANS-MET to facilitate the migration of meteorological information and service provisions from a "product-centric" to an "information-based" environment under the System-Wide Information Management (SWIM), and the evolution of aeronautical meteorological service provisions as referred to in the Global Air Navigation Plan (GANP). The restructuring also provides clearer separation of performance and functional requirements in Annex 3 from the technical specifications to be transferred to the PANS-MET.

Further development of space weather information services: The proposed amendment updates existing provisions regarding space weather information services, which became operational in November 2019, including the upgrade of the provisions from Recommended Practices to Standards and a clarification of the roles of both global and regional space weather centres. The update of the advisory template for space weather (PANS-MET, Table A7-5 refers) is also proposed, which allows the use of an intensity identifier in both observation and forecast and the implementation of an operational status identifier (i.e. exercise ("EXER") and test ("TEST")). Furthermore, based on the inter-panel coordination with the Information Management Panel (IMP), the METP/5 proposed the deletion of the requirements for the issuance of NOTAM related to space weather in both Annex 3 and Annex 15.

Quantitative volcanic ash information and IAVW updates: The METP/5 proposed the introduction of quantitative volcanic ash information, based on enhanced capabilities of quantitative monitoring and dispersion modelling of volcanic ash, as a new Recommended Practice. Initially, it is recommended that only those volcanic ash advisory centres (VAACs) in a position to do so issue quantitative volcanic ash information, and it will be then recommended that all the VAACs issue such information.

The proposed amendment includes the introduction of volcanological notice for aviation (VONA) as a Recommended Practice with better clarification to whom the notice needs to be disseminated. In response to the introduction of VONA, the METP/5 proposed the deletion of the aviation colour code from the volcanic ash advisory. Minor corrections to the templates for the volcanic ash advisory and the relevant information (PANS-MET, Table A7-2, A7-3, A7-4, A7-8, A7-9 refer) and corresponding examples are also contained.

Further development of IWXXM: The proposed amendment will require the dissemination of WAFS forecasts (i.e. upper air gridded and significant weather (SIGWX) forecast) and VONA in IWXXM format and remove the limitation of the number of runway visual range (RVRs) values contained in a single METAR/SPECI in IWXXM format.

Further development of WAFS: The proposed amendment incorporates upgrades to WAFS forecasts to better serve as an enabler to the GANP, allowing world area forecast centres (WAFCs) to issue upper air gridded information with increased spatial and temporal resolution for extended forecast periods (up to 36 hours). It is also proposed to start the issuance of SIGWX forecast in IWXXM format.

Improved definition of meteorological authority: The METP/5 agreed to propose an improved definition of the term "meteorological authority" and, in consequence, a new definition of the term "meteorological service provider", to better clarify the roles and responsibilities reflecting current practices that have been globally implemented.

Final review by the Air Navigation Commission (ANC)

2.2 The comments received from States and international organizations were thoroughly analyzed by the Secretariat, and it was proposed for the final review by the ANC. The final review was held on 2 November 2023, and it was decided that the proposals arising from the METP/5 meeting should be re-submitted for further consideration in a subsequent session in 2024.

2.3 The Secretariat provided an informal briefing to the ANC on 26 March 2024 to present the clarification on some outstanding questions raised during the previous final review. Following the informal briefing, the extended final review was held on 13 June 2024, at the 226th Session of the ANC. The Commission finally agreed that the proposed amendment to Annexes 3 and a new PANS-MET (Doc 10157), incorporating the modification agreed at the final review sessions, was to be consolidated as Amendment 82 to Annex 3 and proposed for the Council's approval, together with other consequential amendments to Annexes 6, Parts I, II and III, 11, 15, PANS-ABC, PANS-AIM and PANS-ATM.

Council adoption and the applicability dates

2.4 In accordance with the deferment of the final review, the applicability date of the amendment, originally expected as 28 November 2024, was re-determined as 27 November 2025. Consequently, the amendment proposal arising from the second meeting of the IMP (IMP/2) for the inclusion of a recommendation on the use of SWIM-enabled information services for the supply of meteorological information will become applicable on 28 November 2024, as Amendment 81 to Annex 3 (State letter AN 10/1.1-24/33 refers).

2.5 The draft reports of the Amendment 82 to Annex 3 and a new PANS-MET, as well as other consequential amendments will be reviewed by the Council at the 234th Session in March/April 2025. The applicability date of this amendment will likely to be 27 November 2025, except for the Annex 3 and PANS-MET provisions related to quantitative volcanic ash information, which will become valid as of 26 November 2026.

2.6 This amendment proposal, including the restructured Annex 3 and a new PANS-MET, contains a broader range of updates to the provision of meteorological services to support modernizing international air navigation, which will lead to a smooth transition towards future quantitative and harmonized meteorological services using digitalized information services under SWIM environment. It is crucial to ensure harmonized approach among States, aeronautical users and industrial parties for the implementation of the changes and new services contained in the amendment.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information provided in this paper.